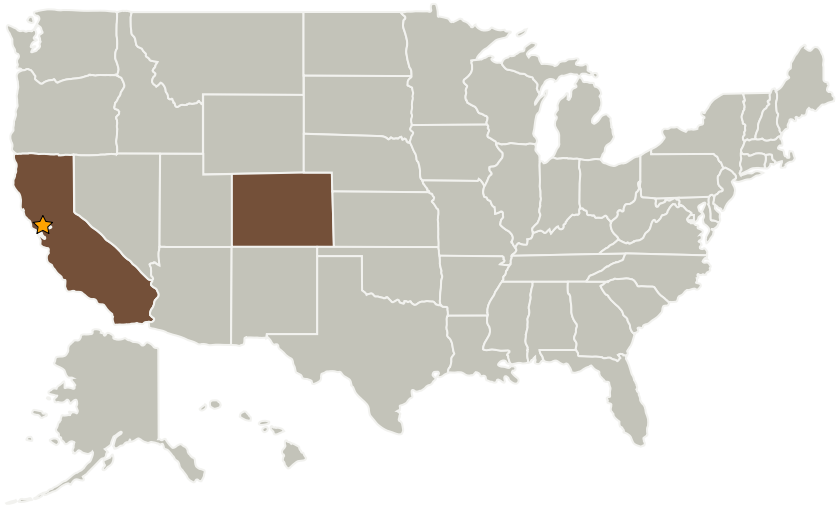
Intelligent Multimodal Signal Adaptation System, Phase I

Completed Technology Project (2005 - 2005)

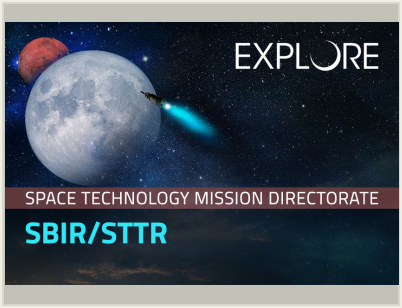
Project Introduction

Micro Analysis and Design (MA&D) is pleased to submit this proposal to design an Intelligent Multimodal Signal Adaptation System. This system will dynamically adapt a display to the optimal modality based upon an operator's workload. As cockpits become more complicated, there is more data to be monitored by pilots in the normal operation of an aircraft. Some of this burden has been lightened with automated systems, but the operator still has to be aware of which automated systems are operating at any given time, and their current mode. Signals are presented to the pilots when these systems start, end, or are in effect, but these signals are often lost in the overwhelming amount of data the operators must attend. A system that could present signals with the highest probability of being noticed by operators would help achieve the goal of ensuring that the right information is delivered at the optimal time and modality so that operators can act on the information. Assuring that pilots are aware of the various states of the aircraft systems would lead, in turn, to greater situation awareness and safety.

Primary U.S. Work Locations and Key Partners



Organizations Performing Work	Role	Type	Location
★Ames Research Center(ARC)	Lead Organization	NASA Center	Moffett Field, California
Micro Analysis & Design Inc	Supporting Organization	Industry	Boulder, Colorado



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Organizational Responsibility

Responsible Mission Directorate:

Space Technology Mission Directorate (STMD)

Lead Center / Facility:

Ames Research Center (ARC)

Responsible Program:

Small Business Innovation Research/Small Business Tech Transfer

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Primary U.S. Work Locations	
California	Colorado

Project Management

Program Director:

Jason L Kessler

Program Manager:

Carlos Torrez

Principal Investigator:

Julie Bzostek

Technology Areas

Primary:

- TX16 Air Traffic Management and Range Tracking Systems
  - TX16.3 Traffic Management Concepts